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			2613	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/23/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/686,372

**Applicant(s)**

NORMAN, CHARLES W.

**Examiner**

Dzung D. Tran

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Specification***

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 8, 9 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Pan U.S. Patent no. 6,968,130.

Regarding claims 1 and 16, Pan discloses in Figure 4, a communication ring/mesh system comprising:

a plurality of optical fibers (e.g., fibers that connected to a plurality of nodes 402, 404, 406, 408..);

a plurality of Point of Presence (POP) nodes (for example, nodes 412, 414) coupled to the optical fibers and configured to exchange communications with external systems; and

a plurality of switch nodes (for example, nodes 402, 410, 420) coupled to the optical fibers and configured to exchange the communications with the POP nodes and to exchange the communications with one another, and wherein in the event of a fault, the POP nodes and the switch nodes are configured to implement ring protection for

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the communications between the POP nodes and the switch nodes and to implement mesh protection for the communications between the switch nodes (col. 10, lines 44-60).

Regarding claims 2 and 17, Pan discloses wherein the POP nodes and the switch nodes are configured to implement the ring protection by re-routing an affected portion of the communications over a protect path or line around an optical ring in the opposite direction of a work path or line, and wherein the switch nodes are configured to implement the mesh protection by re-routing the affected portion of the communications around the fault through an optical mesh (col. 10, lines 44-60).

Regarding claim 8, Pan discloses in Figure 4, a communication system comprising:

- a plurality of optical fibers (e.g., fibers that connected to a plurality of nodes 402, 404, 406, 408..);

- a plurality of two degree nodes (for example, nodes 412, 414) coupled to the optical fibers and configured to exchange communications; and

- a plurality higher degree nodes (for example, nodes 402, 410, 420) coupled to the optical fibers and configured to exchange the communications, and wherein in the event of a fault, the two degree nodes and higher degree nodes are configured to implement ring protection for the communications with the two degree nodes and to implement mesh protection for the communications between the higher degree nodes (col. 10, lines 44-60).

Regarding claim 9, Pan discloses wherein the two degree nodes are configured to implement the ring protection by re-routing affected portions of the communications over a protect path or line around an optical ring in the opposite direction of a work path or line, and wherein the higher degree nodes are configured to implement the mesh protection by re-routing the affected portion of the communications around the fault through an optical mesh (col. 10, lines 44-60).

Regarding claim 15, Pan discloses in Figure 4, wherein additional communications between the higher degree nodes is ring protected.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-7, 10-14 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan U.S. Patent no. 6,968,130 in view of Prior art, Figures 1, 2 of the Specification.

Regarding claims 5 and 10, Pan does not specifically disclose the POP nodes exchange the communications over stacked optical rings within the optical fibers.

The prior art, Figure 2 of the specification, from the same field of endeavor, discloses a ring/mesh communication system in that the POP nodes exchange the communications over stacked optical rings within the optical fibers.

At the time of the invention was made, it would have been obvious to an artisan to implement the stacked optical rings taught by prior art Figure 2 in the ring/mesh communication system of Pan. One of ordinary skill in the art would have been motivated to do that in order to expand the ring/mesh communication system of Pan to provide service for more customers.

Regarding claim 3, the prior art discloses a ring/mesh communication system in that the communication system comprises a long distance network and the external systems include a local telephone network (page 2, paragraph 0025).

Regarding claim 4, the prior art discloses the switch nodes are configured to process telephone numbers to route telephone calls over the optical fibers (page 2, paragraph 0028).

Regarding claims 6, 7, 11 and 12, Pan discloses wherein the mesh protection is based on links that can be connected to form a protect connection with latency that is low enough to avoid echo cancellation and the mesh protection is based on links that can be connected to form a protect connection that maintains a class-of-service of a faulty link (col. 4, lines 23-47).

Regarding claims 13, 14 and 19, Pan discloses the mesh protection uses links pre-planned for the fault and the mesh protection uses links selected after the fault (col. 10, lines 52-60).

Regarding claim 18, it is well known in the art that the ring protection is more expensive for the communication system customer than the mesh protection.

Furthermore, whether or not the ring protection is more expensive for the communication system customer than the mesh protection is merely depend on an engineering design choices.

Regarding claim 20, whether or not the mesh protection using the pre-planned links is more expensive for the communication system customer than the mesh protection using links selected after the fault is merely depend on an engineering design choices.

### ***Response to Argument***

5. Applicant's arguments filed on 12/18/2006 have been fully considered but they are not persuasive.

**A. Rejection of claims 1, 2, 8, 9 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Pan U.S. Patent no. 6,968,130.**

Applicant argues that Pan does not require fault protection based on the type of nodes involved in communication as required by claim 1. However, column 10, lines 44-60 of Pan clearly discloses wherein in the event of a fault, the POP nodes and the switch nodes are configured to implement ring protection for the communications between the POP nodes and the switch nodes and to implement mesh protection for the communications between the switch nodes.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran  
03/15/2007

  
DZUNG TRAN  
PRIMARY PATENT EXAMINER